

Abstract of the Disclosure

A method of forming an electrically conductive element in an integrated circuit is disclosed. The method includes depositing a composite polymer dielectric film onto a silicon-containing substrate, wherein the composite polymer dielectric film includes a silane-containing adhesion promoter layer formed on the silicon-containing substrate, and a low dielectric constant polymer layer formed on the adhesion promoter layer, depositing a silane-containing hard mask layer onto the composite polymer dielectric film, exposing the adhesion promoter layer and the hard mask layer to a free radical-generating energy source to chemically bond the adhesion promoter layer to the underlying silicon-containing substrate and to the low dielectric constant polymer layer, and to chemically bond the composite polymer dielectric film to the hard mask layer, etching an etched feature in the hard mask layer and the composite polymer dielectric film, and depositing an electrically conductive material in the etched feature.